State of California
Regional Water Quality Control Board
San Diego Region

REVISION OF EOSR – Comments, Responses, and Proposed Errata Sheet

EXECUTIVE OFFICER SUMMARY REPORT
December 8, 2004

ITEM: 6

SUBJECT: NPDES PERMIT REVISION: SOUTH ORANGE COUNTY WASTEWATER AUTHORITY, IRVINE RANCH DESALTER PROJECT, ORANGE COUNTY (TENTATIVE ADDENDUM NO. 3 TO ORDER NO. 2001-08, NPDES PERMIT NO. CA0107611) (*David Hanson*)

PURPOSE: To consider modifications to the waste discharge requirements and NPDES permit for the South Orange County Wastewater Authority (SOCWA) discharge through the Aliso Creek Ocean Outfall (ACOO) to accommodate discharge from the Irvine Ranch Water District (IRWD) Irvine Desalter Project (IDP).

PUBLIC NOTICE: A newspaper notice was published in The Orange County Register on November 5, 2004. Copies of tentative Addendum No. 3 were mailed on November 8, 2004 to the discharger and all known interested parties and agencies. These actions served as the 30-day official public notification for this action, as required by Title 40, section 124.10 of the Code of Federal Regulations (CFR). Copies of the tentative addendum have also been made available on the Regional Board website.

DISCUSSION: By letter dated June 10, 2004, SOCWA submitted an application requesting an amendment to Order No. 2001-08 to accommodate the discharge from the proposed IRWD IDP. The purposes of the IDP are to remediate a plume of contaminated groundwater within the City of Irvine and provide an additional source of water to the community. The groundwater remediation project is located in the Santa Ana River Basin (Regional Board 8).

Tentative Addendum No. 3 would, if adopted, establish requirements for the discharge of up to 1.5 million gallons per day of treated groundwater from the IDP through the ACOO. This flow will be routed through the IRWD South Irvine Brine Line to a connection to the SOCWA Effluent Transmission Main just downstream of the IRWD Los Alisos Water Reclamation Plant.

From there, the water will commingle with the treated effluent from various other wastewater treatment facilities and eventually discharge directly to the Pacific Ocean through the ACOO.

The IDP is composed of two components: a non-potable water system and a potable water system.

1. Non-Potable Water System – The non-potable system will accept flow from wells either within or near a plume of groundwater contaminated with volatile organic compounds (VOC), primarily trichloroethylene (TCE) on or near the former Marine Corps Air Station (MCAS) El Toro in Irvine. The following is a description of the non-potable system:

    a. Approximately 400 gallons per minute (gpm) or 0.58 mgd of groundwater from extraction wells within the Department of the Navy's shallow groundwater unit (SGU) will be treated using air stripping. The SGU treatment system is located on the former site of MCAS El Toro. The primary method of disposal will be groundwater injection. However, if the injection well is out of service or the flow rate from SGU wells exceed the capacity of the injection well, the treated water will be directed to disposal through the ACOO.

    b. Approximately 1,000 gpm (1.44 mgd) of groundwater from IRWD well ET-1 will be treated using air stripping and distributed by the IRWD for irrigation and other non-potable uses within the Santa Ana Basin. Flow from well ET-1 will not be discharged through the ACOO.

    c. Approximately 1,900 gpm (2.74 mgd) of groundwater from IRWD wells 78 and 113 (also known as ET-2) will be distributed untreated by the IRWD for irrigation and other non-potable uses within the Santa Ana Basin. Flow from wells 78 and 113 will not be discharged through the ACOO.

2. Potable Water System – Approximately 3,200 gpm (4.61 mgd) of groundwater from IRWD wells located upgradient of the contaminated groundwater plume will be treated using reverse osmosis (RO) to remove total dissolved solids, nitrates, and selenium. The treated water will be distributed by IRWD as potable water. Approximately 457 gpm (0.66 mgd) of RO reject, or brine, will be directed for disposal through the ACOO.

This tentative addendum also clarifies that the technology-based effluent limitations for total suspended solids (TSS), 5-day carbonaceous biochemical oxygen demand ($CBOD_5$), and pH apply to each individual treatment facility discharging to the ACOO and regulated under Order No. 2001-08. This revision is consistent with USEPA interpretation of federal regulations concerning discharges from municipal wastewater treatment facilities.

~~**Responses to any comments and any necessary changes to the tentative addendum will be provided in the second mailing**~~**. Comments have been received from SOCWA (attached), responses have been prepared (attached), and a proposed errata sheet has been prepared (attached).**

KEY ISSUES:

1. If discharged through the ACOO, the discharge from the SGU is required to independently meet the effluent limitations contained in Order No. 2001-08.

2. A revised modeling assessment of the ACOO with the added discharge of the RO brine demonstrated that the addition of the RO brine would not have a significant impact on the calculated initial dilution factor for the combined discharge.

3. **The tentative addendum clarifies that each wastewater treatment facility must meet the technology-based effluent limitation for municipal dischargers set forth in 40 CFR Part 133 for TSS, $CBOD_5$, and pH.**

LEGAL CONCERNS: None

SUPPORTING DOCUMENTS:

1. Facility location map
2. Tentative Addendum No. 3 to Order No. 2001-08 and transmittal letter
3. **SOCWA Comments**
4. **Response to comments (included with December 3, 2004 transmittal letter)**
5. **Proposed Errata Sheet**

SIGNIFICANT CHANGES FROM CURRENT ORDER:

Of the changes proposed in tentative Order No. 2001-08, the following can be considered significant:

1. Establishment of the requirements for the new discharge of up to 1.5 million gallons per day of treated groundwater through the ACOO.

2. Clarification that each wastewater treatment facility must meet the technology-based effluent limitation for municipal dischargers set forth in 40 CFR Part 133 for TSS, $CBOD_5$, and pH.

COMPLIANCE RECORD: The record of compliance with Order No. 2001-08 is excellent with only one non-serious settleable solids effluent violation in 2001, two non-serious reporting violations in 2001, and one spill of secondary effluent in 2003.

RECOMMENDATION: Adoption of tentative Addendum No. 3 to Order No. 2001-08 **with proposed errata** is recommended.